



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
Western Region
600 Harrison Street, Suite 600
San Francisco, California 94107-1372



2-21-91-483
PWS

N1621 (WR-RN/GICY)

25 MAR 1992

Memorandum

To: Field Supervisor, U.S. Fish and Wildlife Service, Arizona

From: ~~ACTING~~ Regional Director, National Park Service, Western Region

Subject: Request for Amendment to Biological Opinion on Proposed Research and Collection Permits for the Humpback Chub in Grand Canyon National Park

Enclosed for your review are five proposals and renewal permits for continued research and collection of the humpback chub (*Gila cypha*) within Grand Canyon National Park. The proposed research has the potential for accidental takes of the bonytail chub (*Gila elegans*), Little Colorado spinedace (*Lepidomeda vittata*), and Colorado squawfish (*Ptychocheilus lucius*).

The proposed research has been developed as part of the Glen Canyon Dam Environmental Studies and was reviewed by the Aquatic Coordination Team (ACT) whose membership includes representatives from the U.S. Fish and Wildlife Service, National Park Service, Bureau of Reclamation, State of Arizona Game and Fish Department, and the Navajo Nation. The specific studies included in this combined research effort are:

- ◀ Characterization of the Life History and Ecology of the Humpback Chub in the Grand Canyon: Investigator: Dr. Richard Valdez, Biowest Inc.,
- ◀ Ecology and Conservation Biology of Humpback Chub, *Gila cypha*, in the Colorado River, Arizona: Investigator: Dr. Paul C. Marsh, Arizona State University and Navajo Nation
- ◀ Habitat Use by Humpback Chub, *Gila cypha*, in the Little Colorado River and Other Tributaries of the Colorado River: Investigator: Owen T. Gorman, U.S. Fish and Wildlife Service
- ◀ Glen Canyon Environmental Studies Phase II Native Fish Studies: Investigator: Dennis M. Kubly, State of Arizona Game and Fish Department
- ◀ Taxonomy Study: Investigator: Dr. Wayne Starnes, Smithsonian Institute

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Questions with regard to enclosed proposals should be directed to National Park Service, Western Region, Threatened and Endangered Species Coordinator, Dr. R. Roy Johnson at (FTS) 484-3957 or (415) 744-3957.

A handwritten signature in black ink, appearing to read "Lew Lubert", with a stylized flourish at the end.

Enclosure(s)

cc:

Margaret Osborne, National Park Service, Washington Office
Superintendent, Grand Canyon National Park